

II. REJECTIONS UNDER 35 U.S.C. § 112

A. Rejection of Claims 21-52 under 35 U.S.C. § 112, First Paragraph

The Examiner rejects claims 21-52 under 35 U.S.C. § 112, first paragraph for allegedly "containing subject matter which [sic] was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention." Office Action at 2. In particular, the Examiner argues that "the instant application fails to describe specific examples of adhesive polymers that satisfy the criteria of claims 21-26." Office Action at 3. The Examiner makes this argument despite her acknowledgement that the "specification describes the adhesive polymer which satisfy this criteria, at page 4 as AQ 1350 sold by Eastman Kodak," under the rationale that "[t]here is no structure given to this polymer except for the trademark name." *Id.* Thus, the Examiner concludes that the "functional language recited in the claims without defining the suitable adhesive polymers, does not meet the written description requirement as one of ordinary skill in the art could not recognize or understand the polymers that satisfy the requirement from the mere recitation of the function." *Id.*

Applicants respectfully traverse the Examiner's rejections for at least the following reasons.

First, contrary to the Examiner's assertion, 35 U.S.C. § 112, first paragraph, does not require that Applicants disclose a particular structure for polymers that exhibit the properties recited in the claims. All that is required for a proper written description under § 112, first paragraph, is that the specification describes the claimed invention in sufficient detail to allow one skilled in the art to reasonably conclude that Applicants had

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possession of the invention at the time of filing. M.P.E.P. § 2163(I). See also *Vas-Cath, Inc. v. Mahurkar*, 935 F.2d 1555, 1560 (Fed. Cir. 1991). "Possession may be shown in a variety of ways including . . . by describing distinguishing identifying characteristics sufficient to show that the applicant was in possession of the claimed invention."

M.P.E.P. § 2163(I). See also M.P.E.P. § 2163(II)(A)(3)(a). Thus, Applicants can demonstrate possession of the claimed invention by describing it with all its limitations using descriptive means such as words, structures, figures, diagrams, and formulas of their own choosing. M.P.E.P. §§ 2163(I) and 2173.01. In this case, Applicants have described their invention using words and formulas as permitted, and the present claims provide sufficient detail about the claimed invention without having to disclose a general chemical formula corresponding to particular polymers exhibiting properties that fall within the claims. For example, the claims recite that the composition, when dried, has a well-defined detachment profile that has at least one maximum detachment force greater than 1 Newton with respect to two defined surfaces. The specification provides ample description of the techniques employed to measure the maximum detachment force. Therefore, the lack of a general polymeric structure in either the specification or claims is not sufficient to render the claims invalid under 35 U.S.C. § 112, first paragraph.

Second, the Examiner "has the initial burden of presenting by a preponderance of evidence why a person skilled in the art would not recognize in an applicant's disclosure a description of the invention defined by the claims." M.P.E.P. § 2163.04. Here, the Examiner has not met her burden of proof and has not shown that one of ordinary skill in the art would not recognize Applicants' possession of the claimed

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invention. The detailed language of the claims themselves is sufficient to demonstrate to one skilled in the art that Applicants had possession of the invention when the application was filed. It is evident that the claims recite a cosmetic hair composition that has very specific properties that are understood by one skilled in the art. This claim language is not mere "functional" language, as indicated by the Examiner, but a listing of particular physical properties of the composition.

Moreover, the terms and formulas Applicants have chosen are used in ways that are not contrary to accepted meanings in the art. The recitation of such detail in both the specification and claims, using terms known in the art, would leave no doubt in the mind of one skilled in the art that Applicants knew what they had invented and were in possession of it at the time of filing. Such detail is more than sufficient to meet the written description requirements of 35 U.S.C. § 112, first paragraph.

Finally, possession of the invention within the meaning of 35 U.S.C. § 112, first paragraph, may be demonstrated by the description of an actual reduction to practice. M.P.E.P. § 2163(I). In this case, Applicants have described an actual reduction to practice of the invention in Examples 1 and 4, found on pages 11 and 13, respectively, of the originally-filed specification. The compositions described in these examples exhibit the properties recited in the instant claims. The polymer used in these examples, sold by Eastman Kodak under the trade name "AQ 1350," is defined in the specification as a branched sulfonic polyester which has a Tg of 0 °C. Specification at page 4. Therefore, Applicants have met the possession requirement of 35 U.S.C. § 112, first paragraph, by describing an actual reduction to practice of the claimed invention.

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Thus, for at least the foregoing reasons, Applicants respectfully request that the rejection of claims 21-52 under 35 U.S.C. § 112, first paragraph be withdrawn.

B. Rejection of Claim 37 under 35 U.S.C. § 112, First Paragraph

The Examiner rejects claim 37 under 35 U.S.C. § 112, first paragraph, for allegedly "containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention." Office Action at 4. Specifically, the Examiner contends there is "no support in the specification for 'ketones, alkyl acetates, and di-alkoxy substituted alkanes,'" because "the specification describes at page 10, 2nd paragraph two compounds under ketones, which are acetone and methyl ethyl ketone." *Id.* The Examiner further states that "[t]he same is true for acetates and di-alkoxy substituted alkanes. Description for two specific compounds in each category is not a support for the entire genus." *Id.*

Applicants respectfully traverse the Examiner's arguments for at least the following reasons.

The Examiner seems to believe that two species examples are never enough to support a genus, but this is not the legal standard. In general, the written description requirement for claims to a genus may be met by the disclosure of a "representative number of species" within that genus. M.P.E.P. § 2163.05(I). What constitutes a "representative number of species" within a particular genus is dependent on the types of compounds being claimed and their disclosed use. *Id.* In some cases, recitation of a single species has been held to be an adequate description of an entire genus. See *In re Rasmussen*, 650 F.2d 1212, 211 UPSQ 323 (CCPA 1981); and *In re Herschler*, 591

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F.2d 693, 200 USPQ 711 (CCPA 1979). Furthermore, according to M.P.E.P.

§ 2163(II)(A)(3)(a)(ii):

Satisfactory disclosure of a 'representative number' depends on whether one of skill in the art would recognize that the applicant was in possession of the necessary common attributes or features of the elements possessed by the members of the genus in view of the species disclosed.

In this case, the recited genera of compounds are being used as organic solvents in the claimed compositions and the recitation of at least two species contained within each genus constitutes a sufficient number of species to describe the entire genus. With respect to the genus of ketones, the specification recites acetone and methyl ethyl ketone. One of ordinary skill in the art would recognize that in listing possible organic solvents, acetone and methyl ethyl ketone demonstrate the necessary common attributes to represent all ketones, i.e., the properties of these two species as organic solvents are representative of all ketones. For the genus "alkyl acetates," the specification recites three species: "methyl acetate, butyl acetate, [and] ethyl acetate." Specification at page 10. Similar to the ketones, one of ordinary skill in the art would recognize that in the listing of possible organic solvents, methyl, butyl and ethyl acetate demonstrate the necessary common attributes to represent all acetates. Finally, for the genus "di-alkoxy substituted alkanes," the specification recites "dimethoxyethane" and "diethoxyethane." Specification at page 10. Again, one of ordinary skill in the art would recognize that dimethoxyethane and diethoxyethane demonstrate the necessary common attributes to represent the genus of di-alkoxy substituted alkanes.

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Thus, for at least the foregoing reasons, Applicants respectfully request that the rejection of claim 37 under 35 U.S.C. § 112, first paragraph be withdrawn.

C. Rejection of Claims 43 and 45 under 35 U.S.C. § 112, Second Paragraph

The Examiner rejects claims 43 and 45 under 35 U.S.C. § 112, second paragraph, "as being indefinite for failing to point out and distinctly claim the subject matter which applicant regards as the invention." Office Action at 4. With respect to claim 43, the Examiner asserts that "the expression 'thiols' as reducing agents lacks clarity and unclear as to applicants intent." Office Action at 4-5. Regarding claim 45, the Examiner objects to the expression "anionic silicones" as "without metes and bounds" and that "[r]ecourse to the specification does not define these class of compounds." Office Action at 5. Applicants respectfully traverse both rejections for at least the following reasons.

When determining a claim's definiteness in compliance with 35 U.S.C. § 112, second paragraph, the Examiner's focus should be whether the claim meets "the threshold requirements of clarity and precision, not whether more suitable language or modes of expression are available." M.P.E.P. § 2173.02. The definiteness of claim language must be analyzed, not in a vacuum, but in light of (1) the content of the particular application disclosure, (2) the teachings of the prior art, and (3) the claim interpretation that would be given by one possessing the ordinary level of skill in the pertinent art at the time the invention was made. *See, e.g., In re Marosi*, 710 F.2d 799, 218 U.S.P.Q. 289 (Fed. Cir. 1983). Moreover, it is a fundamental principle that applicants are their own lexicographers, and may define their invention using whatever

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claim terms they choose so long as the terms "are not used in ways that are contrary to accepted meanings in the art." M.P.E.P. § 2173.01.

Regarding claim 43, the Examiner reasons that "[t]hiols contain the sulfhydryl group, -SH. These are the sulfur analogs of alcohols." Office Action at 5. The Examiner concludes her indefiniteness argument with the queries: "[w]hat is the other moiety attached to sulfur that function as reducing agent. . . . What specific compounds are contemplated for 'thiols'?" Applicants assert that the term "thiols" as used in claim 43 can be readily understood by those skilled in the art. As pointed out by the Examiner, one skilled the art would readily understand that it refers to chemical compounds containing the -SH functional group. Furthermore, Applicants have not used the term in a manner contrary to its accepted meaning in the art. Finally, in response to the Examiner's inquiry, it would be readily understood by one skilled in the art that the sulfhydryl group itself acts as the reducing moiety in the claimed thiols. That is, the sulfhydryl group acts as a reducing agent by being oxidized. There is no other, unrecited portion of the thiol that acts as the reducing agent. *See also* Zviak, *The Science of Hair Care* (1986), p. 190 (discussing "thiols" as reducing agents). For all these reasons, claim 43 is not indefinite.

Regarding claim 45, the Examiner questions whether the "anionic silicones" are "linear or cyclic or volatile or non-volatile." Office Action at 5. As stated above, all that is required under 35 U.S.C. § 112, second paragraph, is that Applicants claim their invention in such a manner that one skilled in the art can understand the boundaries of the claim. In this case, one skilled in the art would readily understand the phrase "anionic silicones" to mean compounds that: 1) contain silicon; and 2) are anionic or

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negatively charged. Applicants have not used the claim terms in a manner contrary to their accepted meanings in the art. Accordingly, the metes and bounds of the claim are clear and claim 45 complies with the definiteness requirement of 35 U.S.C. § 112, second paragraph.

For at least the foregoing reasons, applicants respectfully request that the Examiner's rejections under 35 U.S.C. § 112, second paragraph, be withdrawn.

III. REJECTIONS UNDER 35 U.S.C. § 102(b)

The Examiner rejects Claims 21-38 and 42 under 35 U.S.C. § 102(b) "as being anticipated by U.S. [P]atent [No.] 5,053,221 ('221)' to Robertson et al. Office Action at 5. The Examiner asserts that because the Office "is not equipped to manufacture the composition" or to test the physical attributes, then "[t]herefore the claims are anticipated, absence [sic] of evidence to the contrary." Office Action at 6. Specifically, the Examiner contends there is anticipation by the '221 patent based on the following:

See col.2, lines 30-45 for the beads which read on the claimed particles. There is overlap of concentration and particle size. See the paragraph bridging col.s 3-4 for the adhesive polymer and see col.4, lines 18 et seq and col.5, lines 1-60 for the AQ polymers. The polymer disclosed in the patent reads on the claimed adhesive polymer. See the examples for ethanol which read on the solvent, see col5, lines 60 et seq and col.6 for the additives.

Id. Applicants respectfully disagree with the Examiner and traverse the rejection for at least the following reasons.

A claim is anticipated under 35 U.S.C. § 102(b) only if each and every element as set forth in the claim is found in a single reference. M.P.E.P. § 2131. Furthermore, the identical invention must be set forth in as complete detail as it appears in the

claim. Id. In this case, the '221 patent does not anticipate the instant claims because it does not disclose a composition containing each and every claimed element.

First, the '221 patent does not contain any discussion indicating that its disclosed compositions would exhibit the presently claimed detachment profile. Second, the AQ polymers disclosed in the '221 patent at Col. 4, line 18 to Col. 5, line 2: AQ29, AQ38, and AQ55 have, among other things, a different Tg and hydroxyl content than those of the instant claims. The difference between the Tg and hydroxyl content alone would provide compositions with detachment profiles that do not fall within the claimed parameters. Therefore, the '221 patent does not anticipate the presently claimed invention.

For at least the foregoing reasons, Applicants respectfully request that the rejection under 35 U.S.C. § 102(b) be withdrawn.

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IV. CONCLUSION

In view of the foregoing remarks, Applicants respectfully request the reconsideration and reexamination of this application and the timely allowance of the pending claims.

If the Examiner believes a telephone conference would be useful in resolving any outstanding issues, she is invited to contact Applicants' undersigned counsel at (202) 408-4454.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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